

transmission technology would be used in the ATV service, as indeed it will.²⁶ No broadcast services are currently authorized for regular operation to transmit their signals using digital technology.²⁷

In the past, the Commission has not mandated that LPTV broadcasters convert to ATV by a certain date. Further, the Commission remained committed to the principle that LPTV licensees would remain free to continue to broadcast using the NTSC standard during and after the ATV conversion process. See *Third Order/Third Notice*, 7 FCC Rcd at 6955. However, that commitment seems to be flagging as a result of the language in the *Fourth Further Notice*.²⁸ If this reading of the *Fourth Further Notice*, and the

of information are then modulated onto a carrier frequency and transmitted over the air to a receiver which decodes the information at the reception site.

²⁶ Following testing of various systems in 1991 and 1992, the Advisory Committee reduced the number of possible transmission systems to four proponents of the ATV standard. *Fourth Further Notice* at ¶15. All of these proponents proposed the use of all-digital systems. Consequently, the system developed by the Grand Alliance, and the eventual ATV standard, would necessarily prove to be a digital system. The Grand Alliance system has been documented in the report entitled "Digital Television Standard for HDTV Transmission", prepared by the Advanced Television Systems Committee. See *Fourth Further Notice* at ¶17.

²⁷ The Commission has permitted digital modulation in the Direct Broadcast Satellite (DBS) service. In addition, a vast array of wireless cable operators and licensees has filed a Petition for Declaratory Ruling requesting digital modulation in the Multipoint Distribution Service (MDS) and the Instructional Fixed Television Service (ITFS) at the earliest possible opportunity. This Petition is discussed in greater detail, *infra*.

²⁸ See *Fourth Further Notice* at ¶¶55-60, in which the Commission seeks comment on a scheme for the recovery of spectrum, intended to ensure the largest available block of contiguous

direction of the Commission's intent with respect to available television frequency is correct, then the proposed relief becomes even more important.

V. The Relief Requested Is In The Public Interest

A. Regulatory Status of LPTV Stations Will Be Maintained

The touchstone of the current LPTV rules with respect to its secondary status will be the guiding principle of LPTV digital transmission, i.e., no harmful interference will be caused to nearby analog or digital full power (or low power) television stations. Clearly, the requested relief would comply with LPTV's secondary status regarding full power television stations, nor is the LPTV industry seeking in some circuitous fashion to change that status through the requested relief.

As noted above, the Commission has established a specific definition of the secondary status of the LPTV service. Generally, a low power station may not cause objectionable interference to an existing or proposed full service station. Such low power station that causes objectionable interference to a full service station must eliminate the interference, or the low power station must cease operation. The Commission could strictly enforce this policy, since all digital modulation authorizations will be issued only upon application by the LPTV licensee. Furthermore, the applicant will be required to extend interference protection to every co-channel and adjacent channel licensee and

spectrum. This would surely be put to other, auctionable purposes, and not remain available for NTSC programming on LPTV stations.

applicant, or secure a consent to digital operation from such party.²⁹ Such compliance would ensure the LPTV service's continuing secondary status to the full power television service, while ensuring the survival of the service.

B. Similar Relief Has Been Requested by
The Wireless Cable Industry

The relief requested is similar to that sought by nearly 100 members of the wireless cable industry in its recent Petition For Declaratory Ruling filed with the Commission.³⁰ The Wireless Cable Petitioners are alleged to comprise an "unprecedented grouping" of participants in the wireless cable industry, including the industry's major trade association, virtually every wireless cable systems operator, many MDS and ITFS licensees, consultants and equipment manufacturers. The Wireless Cable Petitioners have converged to request that the Commission move rapidly toward the authorization of digital transmission over MDS and ITFS channels.

Many of the reasons given in support of the request for digital modulation in the wireless cable industry apply equally to the LPTV service:

1. the Wireless Cable Petitioners propose an approach that

²⁹ Certainly, when a given LPTV station proposes to convert to digital technology, and all neighboring stations consent, the Commission can and should rapidly process the application to grant.

³⁰ See *In the Matter of Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Fixed Service Stations*, File No. MM DR-___, filed July 13, 1995 (hereinafter referred to as the "Wireless Cable Petition").

will permit the Commission to authorize digital transmission on an interim basis where it is clearly safe to do so, pending further testing of digital modulation (in the ATV rulemaking proceeding) and the adoption of permanent revisions to the pertinent sections of the Commission's rules. The Petitioners herein seek the same relief.

2. The Wireless Cable Petitioners indicate that the requested relief will enhance competition between wireless cable and the traditional cable industry, an oft-stated policy and goal of the Commission with respect to wireless cable.³¹ The Commission has also stated that broadcasters' conversion to a digital transmission system would promote the desirable goal of competition as well.³²

3. The Wireless Cable Petitioners urge that in addition to expanding the number of video programming services to consumers, digitization will also result in improved picture quality and provide the ability to transmit simultaneously a wide variety of video, voice and data services over the MDS and ITFS bandwidth.

³¹ See Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multichannel Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act - Competitive Bidding, MM Docket No. 94-131 and PP Docket No. 93-253, released June 30, 1995 (hereinafter "MDS Auction Order")(the public interest is better served by competition; an essential component of competition is choice.)

³² "Allowing at least some level of flexibility (through the ATV system) would increase the ability of broadcasters to compete in an increasingly competitive marketplace, and would allow them to serve the public with new and innovative services." Fourth Further Notice, at ¶23.

Wireless Cable Petition at p. 7.

With respect to the ATV proceeding, the Commission has concluded that ATV would allow the television broadcaster to deliver a variety of programming to the home viewer using just one television channel.³³ This conclusion is buttressed by the results contained in the Commission's own studies submitted in the ATV proceeding. These studies describe uses for the ATV channels far beyond anything possible or authorized by the Commission's current rules for television broadcasters. For example, the *HDTV Grand Alliance Presentation* says that:

"Another aspect of the Grand Alliance system which enhances interoperability is the fixed-length packet format that provides for flexible delivery of video, audio, text, graphics, and other data by broadcast, cable satellite and fiber."³⁴

In another study submitted by the Grand Alliance to the FCC regarding the "Transport System", i.e., transmission method, of the ATV service, the Alliance states that:

"The use of a packet id (or PID) in the packet header as a means of bit stream identification makes it possible to have a mix of video, audio and auxiliary data which is flexible and need not be identified in advance. The entire channel capacity can be reallocated in bursts for data delivery. This capability could be used to distribute decryption keys to a large audience of receivers during the seconds preceding a popular pay-per-view program, or download program-related computer software to a 'smart receiver'."

³³ *Fourth Further Notice*, at ¶4.

³⁴ See *Ex Parte Presentation (The HDTV Grand Alliance Presentation)*, filed in MM Docket 87-268, dated August 4, 1993, by Robert Graves, AT&T, a copy of which is attached in Exhibit _____. (the Grand Alliance creates a collaborative effort with a pool of technical talent and financial resources that should ensure that North America is the first to deploy and profit from this important new digital technology.")

Transport Layer Functional Description For the Grand Alliance ATV System, October 11, 1993 (emphasis added). See also *Grand Alliance HDTV System Specification*, Submitted to the ACATS Technical Subgroup, February 22, 1994, at p. 10 (The APC lowpass filter is narrow enough to consistently reject all strong white noise and NTSC cochannel interference signals.)

4. The Wireless Cable Petitioners urge that the time is now ripe for the Commission to begin addressing wireless cable's transition to digital technology. It is perhaps even more urgent for the Commission to consider LPTV's conversion to digital transmission, for several reasons. For instance, the Commission's consideration of digital technology for television broadcasters is at a far more advanced stage. Critical decisions concerning the ATV standard and the ATV table of allotments are being formulated at the present time decisions which will profoundly effect the future of the LPTV industry. The time for Commission consideration of digital technology with respect to the LPTV service is beyond ripe; it is at full maturity, with opportunity being lost with each passing day that LPTV is not included in the formulation of the final ATV rules.

The wireless cable industry has been moving towards digitization since mid-1992. *Wireless Cable Petition*, at P. 7. On the other hand, the ATV proceeding began in 1987, with early testing done as early as 1989.³⁵ While the move to digitize

³⁵ See, e.g., *Interim Report: Further Studies on the Availability of Spectrum for advanced Television -- 1989* OET Technical Memorandum, FCC/OET TM 89-01, (December 1989).

wireless cable is a sound one, the Wireless Cable Petitioners cannot claim to have developed a more detailed record than the television industry has to date with respect to digital transmission.³⁶

5. The Wireless Cable Petitioners admit that a "significant number of unanswered questions" remain regarding the performance of digital technology in the 2.1 and 2.5 GHz bands. Wireless Cable Petition at p. 8. On the other hand, very few questions remain concerning the performance of digital technology in the television bandwidth, due to the voluminous technical record developed in the ATV proceeding.

i. Characteristics of the Digital Radio Signal

The technical data generated by the thorough testing of digital transmission conducted to date in the ATV proceeding amply demonstrates that the relief requested can be granted. Not only does the digital radio signal compress much more information into the current allotted 6 MHz bandwidth than analog modulation; in addition, "robust" digital signals are more highly immune to interference than the NTSC, analog signal.

For example, the testing in the ATV proceeding has demonstrated that one of the members of the Grand Alliance has

³⁶ Wireless cable systems operating in an analog mode have traditionally carried over-the-air broadcast stations, including LPTV stations, through the subscriber's settop decoder box, as a method of increasing the number of channels delivered. As the wireless cable industry converts to digital transmission, this carriage of LPTV stations into the wireless cable home will end, unless LPTV licensees are afforded the same privilege to convert to digital transmission at the same time.